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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/008,451	11/30/2001	Theodore Timaru	WJT002-0022	5174

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1000 COIT ROAD, MS LEGL2  
PLANO, TX 75075

EXAMINER

NGUYEN, LINH V

ART UNIT PAPER NUMBER

2819

DATE MAILED: 10/30/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/008,451

Applicant(s)

TIMARU ET AL.

Examiner

Linh V. Nguyen

Art Unit

2819

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 30 November 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-34 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-34 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11/30/01 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                             | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                    | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other:  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1 – 8, 10 – 17, 19, 20 - 28, 30 – 34, are rejected under 35 U.S.C. 102(b) as being anticipated by Gans et al. U.S. patent No. 5,589,797.

Regarding to claims 1, 10, 19, 30, and 34 Fig. 1 Gans et al. disclose a low distortion amplifier comprising: power amplifier (20); and a predistortion linearizer (14) including a diode capable of generating a distorted signal (Fig. 3) which is reflected onto a signal path and inputted into said power amplifier (Fig. 4), wherein said predistortion linearizer is located a predetermined distance from the signal path, and said distorted signal compensates for at least some of the nonlinear spurs introduced by said power amplifier to an input signal (Sin) applied to the signal path and inputted into said power amplifier such that said power amplifier generates a compensated output signal (Sout).

Regarding to claims 2, 11, 31 wherein the predistortion linearizer (14) includes: said diode; a coupling circuit (Fig. 12[12]), coupled to said diode (Fig. 3), capable of introducing a relatively small amount of power from the input signal into said diode and further capable of reflecting the distorted signal generated by said diode back onto the signal path and into said power amplifier (Fig. 4); and a direct current adjustment circuit, coupled to said diode, capable of adjusting the amount of direct current inputted into said diode (Fig. 3, Fig. 4).

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Regarding to claim 3, 12, 32 wherein said coupling circuit includes a microstrip having a predefined shape and located a predetermined distance from the signal path leading into said power amplifier (Col. 5 lines 42 – 47).

Regarding to claim 4, 15, and 16, wherein said diode is a Schottky diode (Col. 13 line 32)

Regarding to claim 5 – 6, and 13 -14, wherein the coupling circuit and direct current adjustment are automatic or manual adjustment to optimize a shape of the distorted signal of the amplifier (Fig. 1 [16, 17]).

Regarding to claim 7, and 17, wherein said predistortion linearizer does not affect the signal path or the operation of said power amplifier (inherent to Fig. 1).

Regarding to claim 8., wherein said transmitter is incorporated within a point-to-point Communication system (Col. 1 lines 17 – 20).

Regarding to method claims 20 – 28, and 30, are deemed to be made clearly inherent by the structures of Gans et al as applied to claims 1 – 8, above.

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 9 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gans et al., in view of Applicant Admitted Prior Art (AAPA).

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As applied to claims 1 – 8, above Gans et al disclose every aspect of applicant's claimed invention except for the amplifier is operating at or above 2 GHz. However the amplifier operated at or above 2 GHz is a well-known art and conventional as AAPA have indicated in Relate-Art on page 4 line 6. Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to utilizing the amplifier of Gans et al. at or above 2GHz in wireless communication taught by AAPA.

5. Claim 33 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gans et al., in view Johnston et al. U.S. patent No 6,369,603

Gans et al as applied to claim 31 above disclose every aspect of applicant's claimed invention, except for wherein the predetermined distance can be tuned to compensate for the nonlinear spurs using variable capacitors.

Fig. 18 Johnston et al. disclose a RF communication system comprising: the predetermined distance between two coupling elements (244, 232) can be tuned to compensate for the nonlinear spurs using metal variable capacitors (Col. 20 lines 50 – 60).

Gans et al. and Johnston et al. are analogous, because they are from similar problem solving for RF coupling device, therefore it would have been obvious to one having ordinary skill in the art at the time the invention was mad to apply the predetermined distance adjustment taught by Johnston et al. 'coupling to the predetermined distance of Gans et al.'s coupling for the purpose of improving impedance matching between two coupling elements (Johnston et al., Col 20 lines 39 –41)

### ***Contact Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Linh Van Nguyen whose telephone number is (703) 305-1934. The examiner can normally be reached from 8:30 – 5:00 Monday-Friday.


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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Michael Tokar can be reached at (703) 305-3493. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 308-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

LVN

October 24, 2002



Michael Tokar  
Supervisory Patent Examiner  
Technology Center 2800